

Rediscovery of *Terebra formosa* DESHAYES, 1857

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(Plates 12, 13)

As a result of the recent paper, "Large Species of *Terebra* (Mollusca) from the Eastern Pacific" (Hanna & Hertlein, 1961), additional information has been brought to light regarding *Terebra formosa* Deshayes, 1857. The paper dealt with the five species of Panamic *Terebra*, in the strict sense, one of which was described as new, and offered appropriate synonymy in each case. Under the citations of *T. lingualis* Hinds, 1844, *T. formosa* was described from a single specimen with the locality of Panama, and since the original description it appears that no additional specimens have been reported. A single specimen in the collection of the Los Angeles County Museum, labeled *T. formosa*, was examined and found to be a fairly typical *T. lingualis*. A similar specimen in the Stanford University Collection, identified as *T. formosa*, also proved to be *T. lingualis*.

The original illustration of *Terebra formosa* reveals a shell with an acute apical angle and with the color pattern on the bodywhorl consisting of three rows of square chestnut spots. Due to the fact that the spotting is somewhat variable in this group and that slightly worn specimens of *T. lingualis* can be similar in characteristics with the original illustration of *T. formosa*, it was assigned to this species. What the illustration of *T. formosa* does show that is inconsistent with the morpho of *T. lingualis* is a wide subsutural collar that occupies more than half of each whorl on the anterior one-half of the shell.

I am indebted to Mr. Eugene Bergeron, director of Marine Biological Research Associates, Balboa, Canal Zone. Several months after publication of the *Terebra* paper (Hanna & Hertlein, 1961), five specimens of a *Terebra* were received by airmail from Mr. Bergeron (three specimens to the California Academy of Sciences and two to myself). They had been tentatively identified by Mr. Bergeron as *T.*

formosa, and indeed this appeared to be correct as they matched both original figure and description exceptionally well. Three specimens that were collected at Mazatlán, Sinaloa, Mexico, in 1961 and labeled *T. cf. formosa* also proved to be typical *T. formosa* and extended the range 2,000 miles northwest.

My purpose is to retrieve from synonymy *Terebra formosa* Deshayes and restore it as a valid Eastern Pacific species of *Terebra*.

Specimens of *Terebra* available for study included those at the California Academy of Sciences; also made available to me were the specimens of *Terebra* in the collection at Stanford University through the courtesy of Dr. Myra Keen, those in the collection of John and Rose Burch, and those in the Los Angeles County Museum through the courtesy of Mr. George Kanakoff.

Acknowledgement is made to Mr. Eugene Bergeron for his generosity in supplying material that is the basis of this paper, and appreciation is given Mr. R. D. Burch for the loan of four *Terebra formosa* and to Kenneth Boss for the negatives of the "Type" of *T. formosa*.

Family TEREBRIDAE H & A Adams
Genus *Terebra* Bruguière

Key to the species of *Terebra*
(Modified from Hanna & Hertlein)

1. A subsutural spiral groove present on all whorls 2
- A subsutural spiral groove present only on whorls on posterior half of shell . . . 3
2. Color markings a series of conspicuous stripes; apical angle 18° . . . *T. strigata*
Color markings of four spiral rows of square spots on bodywhorl; apical angle 19° *T. ornata*

3. A subsutural collar less than half the width of whorl. 4
 A subsutural collar greater than half the width of whorl; apical angle 15°
 T. formosa
4. Apical angle 18° to 21°; later whorls tumid T. dumbauldi
 Apical angle 8° to 12°; later whorls slender 5
5. Apical angle acute, 8° T. lingualis
 Apical angle broader, 12° T. robusta

Terebra (Terebra) formosa DESHAYES, 1857

(Pl. 12, Figs. 5, 8 to 13; Pl. 13, Figs. 3 to 6)

Original Description

Ter. testâ subulato-turritâ, solidâ, albâ, maculis quadratis rufo-castaneis biserialitâ pictâ, quarum superioribus multo minoribus, anfractibus planulatis, indivisis, obliquè longitudinaliter corrugato-plicatis, plicis biserialitâ granatis, anfractu ultimo et penultimo convexioribus, plicis evanidis; aperiturâ subangustâ, columella crassâ, contorto-recurvâ.

English Translation

Shell subulately turreted, solid, white, painted with two rows of

square reddish-chestnut spots, of which the upper ones are much the smaller, whorls flat, undivided, obliquely longitudinally wrinkle-plaited, plaits marked by two rows of grains, last and penultimate whorls more convex, the plaits faded away; aperture rather narrow, columella thick, twistedly recurved. (Reeve)

Type Specimen

Museum Cumingeanus, British Museum (Natural History). [Plate 13, Fig. 3] Length 71 mm., diameter of last whorl, 13 mm.

Type Locality & Range

"Hab. la mer de Panama."

The southern limit of the range appears to be Panama. Three specimens from Mazatlán, Sinaloa, Mexico, extend the range 2,000 miles northwest.

Explanation of Plate 12

Figure 1: *Terebra lingualis* HINDS. Hypotype 13¹. Far Fan, Canal Zone; E. Bergeron, coll., July, 1961. Length 79 mm, body whorl diameter 16 mm. Figure 2: *Terebra ornata* GRAY. Hypotype 4¹. 5 miles south of Puerto Peñasco, Sonora, Mexico, dredged in 20 to 26 meters: B. Campbell, D. Shasky, A. Martin, September, 1959. Length 88 mm, b. whorl diameter 19 mm (The Veliger, 3 (4): 112, 1961). Figure 3: *Terebra robusta* HINDS. Hypotype 24¹. Diving in 3 to 5 m near San Carlos Bay, Guaymas, Mexico. B. Campbell, coll., December, 1957. L. 88 mm, b. w. diam. 18 mm. Figure 4: *Terebra robusta*. Hypotype 14². Venado Island, Republic of Panama, E. Bergeron, coll., 1960. L. 102 mm, body w. diameter 22 mm. Figure 5: *Terebra formosa* DESHAYES. Hypotype 22¹. Kobbe Beach, Canal Zone; E. Bergeron, coll., 1958. Length 108 mm, b. w. diameter 22 mm. Figure 6: *Terebra dumbauldi* HANNA & HERTLEIN. Hypotype 16¹. Intertidally, Kobbe Beach; Bergeron, coll., October, 1961. L. 109 mm, b. w. diam. 31 mm. Figure 7: *Terebra strigata* SOWERBY. Hypotype 15¹. Far Fan; Bergeron, coll., July, 1961. L. 100 mm, b. w. diam. 29 mm. Figure 8: *Terebra formosa*. Hypotype 17¹. Beach just south of Mazatlán, Sinaloa, Mexico. F. Chevalie, coll., November, 1961. L. 63 mm, b. w. diam. 14.5 mm. Figure 9: *Terebra formosa*. Hypotype 20¹. Kobbe Beach; Bergeron, coll., 1958. L. 85 mm, b. w. diam. 16 mm. Figure 10: *Terebra formosa*. Hypotype 21¹. Same data as for Figure 9. L. 92 mm, b. w. diameter 20 mm. Figure 11: *Terebra formosa*. Same specimen as in Figure 5. Figure 12: *Terebra formosa*. Hypotype 23¹. Same data as for Figure 9. L. 104 mm, b. w. diam. 21 mm. Figure 13: *Terebra formosa*. Hypotype 229³. Littoral; the Causeway, Fort Amador, Canal Zone; W. B. Mackley, coll., 1962. L. 97 mm, b. w. diam. 17 mm.

¹ ex Bruce Campbell Collection; ² ex Gale Sphon Collection; ³ ex R. D. Burch Collection.

Explanation of Plate 13

Figure 1: *Terebra lingualis* HINDS. Photograph of the Type in the British Museum (Natural History). ex Cuming Collection (Twila Bratcher, photo.) Figure 2: *Terebra robusta* HINDS. Photograph of the Type in the British Museum (Natural History) ex Cuming Collection (Twila Bratcher, photo.) Figure 3: *Terebra formosa* DESHAYES. Photograph of the single Type located in the "Museum Cumingianus", British Museum (Natural History) (Kenneth Boss, photo.) Type locality: Panama. Length 71 mm, body whorl diameter 13 mm. Figure 4: *Terebra formosa*. Same shell as Figure 8 of Plate 12. Figure 5: *Terebra formosa*. Same shell as Figure 13 of Plate 12. Figure 6: *Terebra formosa*. Same shell as Figure 12 of Plate 12. (Figures 4, 5 and 6, Bruce Campbell, photo.)



1 2 3 4 5 6 7



8 9 10 11 12 13